

Abstract of the Disclosure

MRI scans typically have higher resolution within a slice than between slices. To improve the resolution, two MRI scans are taken in different, preferably orthogonal, directions. The scans are registered by maximizing a correlation between their gradients and then fused to form a high-resolution image. Multiple receiving coils can be used. When the images are multispectral, the number of spectral bands is reduced by transformation of the spectral bands in order of image contrast and using the transformed spectral bands with the highest contrast.

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